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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/926,705 | 12/05/2001 | Nobuo Fujihara | 216338US2PCT | 2900 |
| 22850 | 7590 | 08/10/2005 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | MATTIS, JASON E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2665 | |

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,705

Applicant(s)

FUJIHARA, NOBUO

Examiner

Jason E. Mattis

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-6, and 9 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 7 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/05/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/01, 12/03, 4/05
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichihara (U.S. Pat. 6587513).

With respect to claims 1 and 9, Ichihara discloses a multiplex communication system implementing a signal processing method (See the abstract, column 5 line 53 to column 6 line 22 and Figure 1 of Ichihara for reference to a multiplex communication system, as shown in the Figure, implementing a signal processing method). Ichihara also discloses a signal converting means converting a digital multiplex signal into an analog baseband signal (See column 5 line 53 to column 6 line 22 and Figure 1 of Ichihara for reference to digital-to-analog converters 7 and 8, which convert a digital multiplex signal to a analog baseband signal). Ichihara further discloses a quadrature modulation means converting the analog baseband signal into an RF signal (See column 5 line 53 to column 6 line 22 and Figure 1 of Ichihara for reference to quadrature modulator 9 modulating the analog signals outputted from the digital-to-analog converters 7 and 8 and outputting an RF signal). Ichihara also discloses a scaling calculation means for calculating a scaling factor used for amplitude adjusting processing of the digital multiplex signal in response to an amplitude of the digital multiple signal and accordance with a suitable amplitude range (See column 5 line 52 to column 6 line 45 and Figure 1 of Ichihara for reference to amplitude calculation circuit 15 that calculates an amplitude of the digital signal, gain calculation circuit 16 and multiplier 30, which together are used to calculated an address of a ROM 14 that generates a scaling factor in accordance with a suitable amplitude range).

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Ichihara further discloses a scaling control means performing the amplitude adjusting processing in response to the scaling factor (**See column 5 line 53 to column 6 line 58 and Figure 1 of Ichihara for reference to complex multiplier 20, which is a scaling control means, multiplying the digital signal by the scaling factor outputted from the ROM 14**). Ichihara also discloses a control signal generating means generating a control signal (**See column 7 lines 20-26 and Figure 1 of Ichihara for reference to gain control signal Gc being generated**). Ichihara further discloses a signal correcting means processing the RF signal output from the quadrature modulation (**See column 7 lines 20-26 and Figure 1 of Ichihara for reference to variable gain amplifier 10, which is a signal correcting means, processing the RF signal in accordance with the gain control signal Gc**).

With respect to claim 2, Ichihara discloses that the scaling calculation means calculates the scaling factor from an effective value of amplitudes and from a digital conversion value of the suitable amplitude range (**See column 5 line 52 to column 6 line 58 and Figure 1 of Ichihara for reference to calculating the scaling factor from an amplitude calculation performed by amplitude calculation circuit 15 and from a suitable amplitude range as stored by the ROM 14**).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichihara in view of Jaffee et al. (U.S. Pat. 6006079).

With respect to claims 5-6, Ichihara does not disclose passing the control signal through a RAMP processing.

With respect to claims 5-6, Jaffee et al., in the field of communications, discloses passing a control signal through ramp processing (**See column 4 lines 9-20 of Jaffee et al. for reference to a ramp circuit performing ramp processing**).

Passing a control signal through ramp processing has the advantage of smoothing the control signal so that control signal adjustments are performed at a less rapidly changing rate.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Jaffee et al., to combine passing a control signal through ramp processing, as suggested by Jaffee et al., with the system and method of Ichihara, with the motivation being to smooth the control signal so that control signal adjustments are performed at a less rapidly changing rate.

Allowable Subject Matter

6. Claims 3-4 and 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for allowance:

Claim 3 would be allowable over the prior art of record because the prior art of record fails to disclose or render obvious calculating a scaling factor using the equation " $S = \text{INT}\{\log_2(D/Z)\}$ " as claimed. Claims 4 and 7-8 would be allowable since they depend on allowable claim 3.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McGowan et al. (U.S. Pat. 6236864) discloses a CDMA signal generator using peak power processing with scaling.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jem



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